

## CLAIMS

The invention claimed is:

1. A method for preserving transient data of a telecommunications switch, the method comprising:

increasing the size of a communications buffer that is associated with establishing a communications link with the switch to a predetermined buffer size;

establishing the communications link with the switch; without user intervention, executing in batch a plurality of data-request commands;

receiving a plurality of information sets in response to the plurality of the data-request commands; and

automatically parsing the plurality of information sets to produce an output file, the output file including at least a portion of data from the plurality of information sets, wherein the portion of data is arranged in a format that includes a plurality of rows that respectively correspond to the portions of data.

2. The method of claim 1, wherein the communications buffer is a buffer associated with logic to establish a telnet session.

3. The method of claim 1, wherein the predetermined buffer size is set according to the number of the plurality of data-request commands.

4. The method of claim 2, wherein executing the plurality of data-request commands includes referencing a first file that includes the plurality of data-request commands.

5. The method of claim 4, wherein the data-request command include commands to retrieve operational-measurement data from the switch.

6. The method of claim 5, wherein the operational-measurement data include one or more selections from the following:

usage data related to one or more trunk groups;

a count of incoming calls;

a indication of call volume;

an indication of data capacity;

a count of incoming-call attempts;

a count of call overflows;

a count of glare instances;

a count of trunks operating;

a count of incoming call failures;

a count of outbound failures; and

traffic-flow metrics.

7. The method of claim 4, wherein automatically parsing the plurality of information sets comprises:

identifying a first pattern of data within one of the plurality of information sets;

retrieving a data value based on the pattern;

iteratively identifying successive patterns of data within the plurality of information sets;

iteratively retrieving respective data values based on the pattern; and  
communicating the data values to the output file.

8. One or more computer-readable media having computer-useable instructions embodied thereon for performing a method of troubleshooting a communications network, the method comprising;

establishing a communications link with a network element;  
referencing an input file that includes a plurality of data-request commands;

automatically executing the plurality of data-request commands at the network element;

generating an intermediary file that includes raw data returned incident to automatically executing the plurality of data-request commands; and  
without user intervention, generating an immediately accessible output file that includes all or a portion of the raw data in a prescribed format.

9. The media of claim 8, wherein establishing a communications link with a network element includes modifying the size of a communications buffer to a size that will prevent overflows when receiving data from said network element.

10. The media of claim 9, wherein said size of said communications buffer is proportional to the number of said plurality of data-request commands.

11. The media of claim 10, wherein said size of said communications is approximately 500 kb per data-request command.

12. The media of claim 9, wherein said data-request commands include operational-measurement commands.

13. The media of claim 12, further comprising presenting said output file on an output device, including a display device or hardcopy device.

14. The media of claim 13, wherein presenting said output file includes importing said output file in a spreadsheet program.

15. The media of claim 13, wherein presenting said output file includes presenting said raw data in a graphical format.

16. The media of claim 15, wherein presenting said output file includes presenting said raw data in a Web-based format.

17. A computer-implemented method for troubleshooting a communications network, the method comprising:

manipulating a size of a communications buffer that will be used to receive data from a network element;

automatically retrieving transient data from the network element by issuing a plurality of data-request commands; and

without user intervention, storing the transient data in a format having a plurality of rows, each of the plurality of rows corresponds to a data set returned from a respective data-request command.

18. The method of claim 17, wherein manipulating a size of a communications buffer includes sizing said buffer according to the amount of transient data to be received from said network element.

19. The method of claim 18, wherein the data-request commands include commands to retrieve operational-measurement data.

20. A computer-implemented method for preserving temporary data of a network element in a communications network, the method comprising:

- providing a plurality of data-request commands to successively extract data sets from the network element;
- sizing a buffer to be used to receive the successively extracted data sets to a value equal to approximately 1 Mb per data-request command;
- establishing a communications link with the network element;
- submitting the plurality of data-request commands in batch;
- receiving the data sets; and
- formatting the data sets in a matrix format.

21. The method of claim 20, wherein said data-request commands retrieve operational measurement data from said network element.

22. The method of claim 21, wherein formatting the data sets includes depicting said data sets in a graphical format.

23. A system for identifying problems in a communications network, the system comprising:

one or more memory components;  
a set of computer-useable instructions to be received by the one or more  
memory components that, when executed:  

- (1) establish a communications link with a network element;
- (2) extract transient data from the network element; and
- (3) formats the extracted data according to a predefined format.